

What is claimed is:

1. A rotating retractable writing instrument comprising:

a rear outer cylinder with an open front face;

5 an inner sheath unrotatably accommodated in said rear outer cylinder; and

a front outer cylinder with open faces on both ends, wherein: a mouthpiece and a writing core element can be thrust out of an opening formed on the front face of said front outer cylinder, said writing instrument  
10 further comprising:

a protrusion for restraining rotating range arranged on a front end face of said inner sheath; and

a refill sliding cam and a mouthpiece sliding cam formed on an inner face of said inner sheath, said writing instrument further comprising:

15 a refill sliding element and a mouthpiece sliding element accommodated in said inner sheath slidably in an axial direction and unmovably in a radial direction; and

protruded portions for sliding formed respectively on outer faces of said refill sliding element and said mouthpiece sliding element; wherein: said  
20 protruded portions for sliding are respectively fitted to said refill sliding cam and said mouthpiece sliding cam; and said mouthpiece sliding element is slidably and unrotatably connected to said refill sliding element, said writing instrument further comprising:

a connecting element connected to said inner sheath rotatably and  
25 unmovably in the axial direction; and

a rotating position restraining member arranged on an outer face of said connecting element for restraining a rotation of said inner sheath; wherein: said mouthpiece sliding element is slidably fitted to said connecting element, wherein:

30 when said rear outer cylinder is rotated in one direction relative to said connecting element, said inner sheath is rotated in the same direction

together with said rear outer cylinder so that said mouthpiece and said writing core element are propelled forward and thrust out of said opening of said front outer cylinder; and

when said rear outer cylinder is further rotated in the same direction,  
5 said writing core element is propelled forward and thrust out of an opening  
on the front face of said mouthpiece.

2. The writing instrument according to claim 1, wherein:

said writing instrument further comprises a connecting member;

a flange shaped portion with a large diameter is arranged in the middle  
10 of said connecting screw;

a rear end face of said flange shaped portion is slidably fitted to the  
front face of said rear outer cylinder;

said front outer cylinder is detachably connected to said connecting  
member; and

15 said connecting member is detachably connected to said connecting  
element.

3. The writing instrument according to claim 1 or claim 2, wherein:

in a first range starting from an arbitrary line in an axial direction on  
the inner face of said inner sheath, said refill sliding cam and said  
20 mouthpiece sliding cam respectively have first slopes;

in a second range succeeding to the first range, said refill sliding cam  
has a perpendicular portion and said mouthpiece sliding cam has a sliding  
element fitting recess;

25 in the next third range, said refill sliding cam has a second slope and  
said mouthpiece sliding cam has a perpendicular portion;

in the next fourth range, said refill sliding cam has a sliding element  
fitting recess; and

in the next fifth range, said refill sliding cam and said mouthpiece  
sliding cam respectively have protrusions for restraining rotation.

30 4. The writing instrument according to any one of claims 1 to 3,  
wherein:

a resistant member is arranged on an outer face of said connecting element such that said resistant member is slidingly contacted to said rear outer cylinder.

- 5        5. The writing instrument according to claim 4, wherein:  
          said resistant member is an O-ring.